STATE OF TEXAS
EFFECTIVE COMMUNICATIONS TOOLKIT:
Emergency Communications
With People Who Have Disabilities
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Accessibility Information

The Texas Division of Emergency Management strives to make all materials accessible to everyone. In limited instances where universal accessibility is not achieved, alternate versions of this Toolkit may be obtained by contacting soc@dps.texas.gov or calling 512-424-2208 using the relay option of your choice.

Feedback

This document is updated frequently. Your feedback is appreciated. Please contact soc@dps.texas.gov or 512-424-2208 with any suggestions.

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Chapter 1: Introduction

The first chapter of this toolkit describes its purpose, presents an overview about how to find the material you need, and tells you why you must follow its guidance.

Purpose

This toolkit is your guide to ensure that people with disabilities receive equal access to information and services during an emergency.

Effective Communication is the first step in providing equal access to information and services.

Effective Communication

"Effective communication" means that people with disabilities must be given information comparable in content and detail to that given to the general public. This communication must be accessible, understandable, and timely.

You must provide information and services that are comparable in content and detail to all people, including those who have disabilities or functional and access needs. The Federal Emergency Management Agency (FEMA) endorses this "whole community" integrated approach.

When people with disabilities can access the same information, perform the same essential tasks, and receive the same services as people who do not have disabilities, the information and services are accessible.

This toolkit applies to professionals from local jurisdictions in the following fields:

- emergency management
- public information
- first responders
- shelter managers

In this toolkit, you will find guidelines and tools for these methods of accessible communications:

- warnings
- notifications
- other messages to the news media and the public
- face-to-face interaction

For information about the population of people with disabilities and about assistive technology, see these resources in the Appendix:

- Accessibility by the Numbers
- Understanding Assistive Technology

Overview

This toolkit is divided into the following chapters:

- Chapter 2: general guidance for all communications, including important steps to take before disaster strikes
- Chapter 3: how to make the following methods of communications accessible:
    - alerts and warnings
    - press conferences
    - written communication
    - videos
    - social media
    - meetings
    - face-to-face communications
- Chapter 4: auxiliary aids and services for various disabilities
- Chapter 5: emergency communications tools for people with disabilities
- Chapter 6: additional resources and training
- Chapter 7: legal authority

It's the Law

The most common legal basis for requiring accessible information is the Americans with Disabilities Act. The Americans with Disabilities Act is a civil rights law requiring that:

- all state and local governmental entities ensure that their communications with people who have disabilities are as effective as their communications with those who do not have disabilities,
- state and local governmental entities provide equal access to programs and services.

To meet these requirements, state and local jurisdictions must:

- develop all emergency management materials in accessible formats in order to integrate the needs of people with disabilities,
- support auxiliary aids and services to provide effective communication to people with disabilities.

Chapter 7 of this toolkit contains additional information about the legal authority governing emergency management and people with disabilities.

The topics in this document offer a general guide for Texas state agencies and local jurisdictions like cities and counties. After coordinating with local disability groups, you might want to change or add to this guidance to suit your specific needs.

This guidance is not intended to create new legal obligations or change existing obligations. It is not a legal interpretation of the statutes that form the basis of this document. It does not cover all the requirements for existing or potential communications plans or standard operating procedures. It is a resource to support people with disabilities by integrating effective communications into the emergency planning process and existing documents. Information presented in this toolkit might have been summarized, modified, and combined from other sources, with appreciation.

Chapter 2: General Guidance

This chapter provides an overview of the best way to communicate with people with disabilities and important steps to take before a disaster strikes. You will learn these topics:

Accessibility

More than three million Texans have disabilities that can affect their interaction with the Internet, the telephone, and other means of communication. Making electronic and information resources accessible provides access to emergency information and related emergency services to Texans who have disabilities.

Emergency managers must communicate in a manner that reaches the whole community. Most communications strategies use several types of communications technologies. These technologies can include web pages, email, text messaging, social media, streaming video or multimedia content, printed material and telephones. Each type of communication must be accessible.

Accessible documents, products, services, or environments:

- reach the broadest audience,
- can be used by people with varying abilities,
- are mandated by disability rights law (for example, Sec. 508),
- require additional planning.

It is more cost-effective to incorporate accessibility techniques from the beginning of document creation than to make documents accessible retroactively.

What is Accessibility?

When information technology and communications are accessible they are:

- **P**erceivable – users can perceive information and user interface components,
- **O**perable – user interface components and navigation must be operable,
- **U**nderstandable - information and operation of the user interface must be understandable,
- **R**obust – content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies.

Benefits of Accessible Information

Some modifications intended for people with disabilities provide access benefits to all. (Curb cuts and automatic door openers are two of the most common examples.) Accessible document and web design is a similar innovation that benefits all users, not just those with disabilities.

The structure of accessible documents makes them more easily understandable for all users, not just those with disabilities.

When information is prepared or coded accessibly, it is more likely that everyone can find it. The same standards that support good accessibility for web pages also support search engine optimization.

Accessible information is also more likely to work across a variety of browsers, computer platforms and mobile devices.

Finally, accessible documents contain text descriptions for visual and audio content. These text descriptions are quicker to download for anyone who has a slow internet connection.

Accessible information benefits users with disabilities because their assistive technology can interpret it. Assistive technology increases or maintains the capabilities of people who have disabilities.

For example, people who cannot see computer monitors might use screen readers. Screen readers speak the text that would normally appear on a monitor.

People who have difficulty using a computer mouse can use voice recognition software to control their computers with verbal commands.

People with other types of disabilities may use other kinds of assistive technology, and new assistive technologies are being introduced every day.

Steps to Take Before an Incident Occurs

Adopting the guidance in this section before an incident occurs will give you a solid foundation for emergency management. This section contains the following information:

Adopt the Whole Community Approach

This approach includes the whole community in the process of understanding its collective needs and determining the best ways to organize and strengthen its assets, capacities, and interests. The Whole Community includes residents, emergency management practitioners, organizational and community leaders, and government officials.

To put the Whole Community approach into practice:

- **Establish relationships with community leaders, agencies, advocates and representatives of people with disabilities** (like independent living centers, mayors' committees for people with disabilities, or disability organizations listed with 211). Learn how the programs and services your organization provides (like transportation, water, power, etc.) affect people with disabilities. Learn each community's:
    - demographics,
    - values,
    - norms,
    - structures,
    - networks,
    - relationships.

    Community engagement can lead to a deeper understanding of the unique and diverse needs of a population. The more we know about our communities, the better we can understand their unique safety and sustaining needs and their motivations to participate in emergency management-related activities prior to an event.

The Texas Division of Emergency Management's Functional Needs Support Services Toolkit includes more information about establishing relationships with community leaders.

Functional Needs Support Services (FNSS) are services that enable children and adults with or without disabilities who have access needs and functional needs that must be met in order to maintain their health, safety, and independence. These needs may include personal assistance services (PAS), durable medical equipment (DME), consumable medical supplies (CMS), and reasonable modification to common practices, policies and procedures. People who need FNSS may have sensory, physical, mental health, cognitive and/or intellectual disabilities that affect their ability to function independently. Additionally, elderly people, women in the late stages of pregnancy, and people requiring communication assistance and bariatric support (that is, help that is needed because of obesity) might also benefit from FNSS.

- **Engage and empower all parts of the community**. Engaging the whole community and empowering local action will help stakeholders plan for and meet the unique needs of the community. This process will strengthen the local capacity to deal with the consequences of all threats and hazards. When the community is engaged in an authentic dialogue, it is empowered to identify its needs and the resources it has can be used to address those needs.
- **Strengthen what works well in communities.** A Whole Community approach to building community resilience requires finding ways to support and strengthen the institutions, assets, and networks that already work well in communities and are already addressing issues that are important to community members on a daily basis.

In addition, consider developing a local CERT Team which includes members who are deaf, hard of hearing and late-deafened to help with planning and communications in shelters during a disaster.

This toolkit contains additional resources about establishing a whole community approach in your jurisdiction.

Plan Ahead with Local Media

Consult with local media (television stations, radio stations and cable networks) in non-emergency times to discuss the stations' requirements from the Federal Communications Commission (FCC) for emergency broadcasts and accessibility of information on television. In addition, consider reminding them of these requirements during emergencies.

Requirements for Broadcasters during an Incident

Federal Communications Commission rules require broadcasters and cable operators to make local emergency information accessible to people who are deaf or hard of hearing, and to people who are blind or have visual disabilities. This rule means that emergency information must be provided both audibly and visually.

Emergency Information

Emergency information is information that is intended to further the protection of life, health, safety or property during an incident. Examples of emergencies include:

- immediate weather situations: tornadoes, hurricanes, floods, tidal waves, earthquakes, icing conditions, heavy snows, widespread fires, warnings and watches of impending weather changes;
- community situations: discharge of toxic gases, terrorist attacks, widespread power failures, industrial explosions, civil disorders, school closings and changes in school bus schedules resulting from such conditions.

Make Incident Information Accessible for Television

In the case of people who are deaf or hard of hearing, emergency information that is provided in the audio portion of programming must be provided using closed captioning or other methods of visual presentation. Alternative methods of visual presentation include:

- open captioning,
- crawls or scrolls that appear on the screen.

Information on the screen must not block closed captioning. Also, closed captioning must not block any other emergency information.

Closed captions are visual text displays that are hidden in the video signal. You can access closed captions through your remote control, an on-screen menu, or through a special decoder. All TVs with a 13-inch or larger diameter screen manufactured after 1993 have caption decoder circuitry. Open captions, on the other hand, are an integral part of the television picture. They cannot be turned off.

Text that advances slowly across the bottom of the screen is called a "crawl;" displayed text or graphics that move up and down the screen are said to "scroll."

For people who are blind or have low vision, regularly scheduled newscasts and newscasts that interrupt regular programming must be accessible. The audible description of texts or graphics that describe emergency information fulfills this requirement. For instance, the announcer must verbally describe a list of counties affected by a storm instead of only referring to "the counties shaded in red."

If the emergency information is being provided during non-newscast programming (for instance, the programmer provides the emergency information via crawling or scrolling text at the bottom of the screen during regular programming), an audible tone must accompany this information. This tone alerts people with vision disabilities that the broadcaster is providing emergency information, and that they should tune to another source, such as a radio, for more information. In addition, this visual information must be provided audibly on a secondary audio stream.

Required Information to Broadcast

The information provided visually and audibly must include critical details regarding the incident and how to respond. Critical details could include, among other things:

- details regarding the areas that will be affected by the emergency;
- evacuation orders, detailed descriptions of areas to be evacuated and specific evacuation routes;
- road closures;
- approved shelter locations or how to take shelter in one's home;
- instructions on how to secure personal property;
- how to obtain relief assistance.

Check Your Documents and Website for Accessibility

Before disaster strikes, each agency and jurisdiction should develop a plan to:

- ensure that all documents, slide presentations, spreadsheets, PDF documents, websites and any other documents are created in accessible formats;
- ensure that staff and contractors responsible for web page and content development are properly trained;
- post a telephone number or email address on the home page to provide a way for visitors to request accessible information or services.

Chapter 3 contains additional information about accessible websites.

People First Language

Use "People First Language" when talking about people with disabilities.

People with disabilities are — first and foremost — people. People with disabilities are people who have individual abilities, interests and needs. For the most part, they are ordinary individuals seeking to live ordinary lives.

According to the American Community 2014 Survey microdata estimates, about 3.3 million Texans have a disability. Their contributions enrich our communities and society as they live, work and share their lives.

Every individual, regardless of sex, age, race or ability, deserves to be treated with dignity and respect.

Like other minorities, the disability community has developed preferred terminology — People First Language. People First Language is an objective way of acknowledging, communicating and reporting on disabilities. It eliminates generalizations, assumptions and stereotypes by focusing on the person rather than the disability.

As the term implies, People First Language refers to the individual first and the disability second. It's saying "a child with autism" instead of "the autistic."

In addition to changing the way you refer to people with disabilities, it's also important to ask yourself if the disability even needs to be mentioned in the context of the conversation.

Texas Government Code section 531.0227 requires that state agencies use People First language to avoid creating a barrier to inclusion as equal community members for people with disabilities.

Table 1: What Should You Say?

People First Respectful Phrases	Inappropriate Phrases
person with an intellectual, cognitive, or developmental disability	retarded; mentally defective
an individual or person with a disability	the disabled, handicapped, disabled person
people with disabilities	the handicapped, the disabled, the impaired
has a disability	suffers from a disability
person who is blind or person who has low vision	the blind
person who is deaf	the deaf; deaf and dumb
person who is hard of hearing	suffers a hearing loss, the deaf
person who has multiple sclerosis	afflicted by or victim of multiple sclerosis
person with epilepsy, person with seizure disorder	an epileptic
person who uses a wheelchair	confined or restricted to a wheelchair; wheelchair bound

People First Respectful Phrases	Inappropriate Phrases
person who has muscular dystrophy or any other condition that causes a disability or disabilities	stricken by muscular dystrophy or any other condition that causes a disability or disabilities
person with a physical disability	crippled; lame; deformed
person without a disability	normal person (implies that the person with a disability is not normal)
unable to speak, uses synthetic speech	dumb; mute
person with psychiatric disability or a person with a mental illness	crazy; nuts; mental; etc.
person who is successful, productive	has overcome his or her disability; is courageous (when it implies the person has courage because of having a disability)
has had [an arm or both arms amputated; a leg or both legs amputated]	is an amputee; is a double amputee
hard for the person to get out	homebound, bedbound

(Much of this section came from the Texas Council for Developmental Disabilities.)

A singular exception to People First Language might be the Deaf community. Many deaf people regard their deafness as a cultural identity with its own

language. People who follow this mindset might not refer to themselves with People First Language.

Plain Language

Plain language is communication your audience can understand the first time they read or hear it.

Written material is in plain language if your audience can:

- find what they need,
- understand what they find,
- use what they find to meet their needs.

Clarity is the key when writing in plain language. Any person, no matter how literate, might read poorly when tired, hurried, or stressed – these conditions are common during emergencies.

The Plain Language Writing Process

Plain language is a five step process:

1. Identify your specific audience.
    a. Who are they?
    b. What do they already know?
    c. What do they need to know? (Address separate audiences separately.)
2. Organize information.
    a. Meet the audience's needs (chronological, alphabetical, etc.).
    b. Address one person, not a group.
    c. Include lots of useful headings.
    d. Write material in short sections.
3. Write using plain language techniques (see below).
4. Create a user-friendly design and formatting (see below).
5. Test your document to see if it is really "plain". While you can test for plain language in many ways, in an emergency situation, paraphrase testing is the most efficient. Ask members of your audience to paraphrase what they heard or read. If the audience understands your communication, it probably meets the requirements for plain language.

Plain Language Writing Techniques

Plain language writing techniques include the following:

Table 2: Plain Language Techniques

Technique	Use:	Avoid:
Active voice	You must evacuate this house.	This house must be evacuated.
Use simple present tense.	These sections tell you how to meet the application requirements.	These sections describe types of information that would satisfy the application requirements.
Avoid "hidden" verbs in nouns.	We need to decide.	We need to make a decision.
Use the simplest, most easily understood word that will do the job.	Use this form.	Utilize this form.
Engage your audience by using the pronoun "you."	You must provide copies of your tax returns.	Copies of your tax returns must be provided.

In addition, the following techniques make communications easier to understand:

- Use shorter sentences. An average of 10–15 words is a good range. However, sentences of varying lengths engage your audience.
- Limit jargon and acronyms. Focus on the audience and what they will understand. Define terms you need to use but that they might be unfamiliar with. Spell out the first instance of any acronym and add the acronym in parentheses after it. For example, write "U.S. Geological Survey (USGS)."
- Use gender-neutral language.
- Use words instead of slashes. For example, avoid "and/or."
- Use "and" instead of using an ampersand (&).

- Spell out "for example" and "that is" instead of using "e.g." and "i.e."

Appeal to the audience's interest with benefits and actions:

- Point out clearly how your message benefits your audience.
- Focus on what actions they need to take or do.
- Make it easy for readers to understand what they need to do by using bulleted lists or checklists.

Plain Language Formatting Techniques

Some tips for formatting include the following:

- Make good use of white space:
    - Limit the amount of text and break up large blocks of text by using headings, lists, etc.
    - Ensure that there are adequate margins, gutters between columns, and space above headings.
- Use informative titles, subtitles, and subheadings to help the reader find information.
- Format titles, subtitles and headings with document styles to make them accessible to screen readers used by people with visual disabilities.
- Left-align and ragged right your paragraphs. In other words, don't justify your paragraphs.
- Limit line lengths to 65 characters or fewer.
- Creating bulleted or numbered lists is an effective way to break up long paragraphs.

You can find additional Plain Language resources in Chapter 6 of this Toolkit.

Multi-Modal Communications

Multi-modal communications use multiple delivery methods. Consider the following guidelines when planning your emergency management strategy:

- No one medium will reach everyone. Make sure your messages are compatible with multiple media and transmission systems.
- Use traditional media, webpages and social media (Facebook, Twitter, Instagram, etc.) when possible.
- Use alert and notification systems.

Print, radio, and TV (both live and recorded) are the traditional media outlets that governments use during emergencies. However, social media has changed traditional communication in significant ways. Use all the media outlets you have access to in order to reach as many people as possible.

Effective communication techniques should include a variety of approaches, such as:

- plain language,
- nonverbal gestures,
- signage,
- both high- and low-tech media.

Accessible Charts, Graphs, Maps, Images and Visuals

Use charts, graphs, maps, and other visual aids with care:

- Only use charts or graphs when absolutely necessary. (Readers do not always understand them.)
- Limit the number of items running down and across tables or graphs.
- Give clear and simple directions about how to read the charts or graphs.
- Use pictorials instead of abstract charts or graphs.
- Most readers can easily follow pie charts.
- Add text alternatives to all visuals so that screen readers can access alternative text or captions. For complex graphics or charts, an alternative presentation such as a data table might be necessary. For example, if a map shows a counties affected by a storm in red, a text list of those counties is also required.

See more detailed information about accessible visuals in Chapter 3.

Accommodation Statement for All Messaging

Consider including the following information on all agency and jurisdiction websites, documents, brochures, flyers, or any other pertinent documents:

"As a covered entity under Title II of the Americans with Disabilities Act, the [insert organization title here] does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities.

"You may request communication accommodations or disabilities support needs. Call xxx-xxx-xxxx using the relay option of your choice or email the Texas Division of Emergency Management at [include email address]."

Chapter 3: Methods of Communication

Chapter 3 contains strategies for creating accessible communication in a variety of formats:

- alerts, warnings and notifications
- press conferences and live broadcasts
- meetings
- accessible Documents and Websites
- multimedia
- social media
- audio files
- charts, Graphics, Maps, Images & Visuals

Accessible Alerts, Warnings and Notifications

Consider the following guidelines when drafting alerts, notifications and warnings.

General Strategy

When distributing public information, provide clear, step-by-step directions and use an "actions to take" and a "what to do" approach.

Alert and notification systems might be limited to a certain number of characters. Succinct communication is important.

Each alert should contain the following information:

- **Specific hazard** - What kind of hazard is threatening? What are the potential risks for the community?
- **Location** - Where will the impacts occur? Describe the location so that those without local knowledge can understand their risk.
- **Timeframes** - When will it arrive at various locations? How long will the impacts last?

- **Warning source** - Who is issuing the warning? Identify an official source with public credibility.
- **Magnitude** - What impact is expected and how bad is it likely to get?
- **Likelihood** - How probable is occurrence of the impact?
- **Protective behavior** - What protective actions should people take and when? If evacuation is called for, where should people go and what should they take with them?

Modifications for People with Disabilities

- Create spoken messages.
- Create captions for messages that are consistent with the audible portion.
- Compose messages in plain language.
- Include door-to-door outreach when possible. Ring the doorbell, pound on the door and shine a flash light into a window. Some people who are deaf have special "doorbells" that set off a different and visual alert, such as a blinking light. Pounding on the door or shining a light into a window can be more effective than simply knocking because people that can't hear a knock might respond to the vibration or light.
- If you provide video remote-interpreting for emergency messages, read more about that service here.

Accessible Press Conferences and Live Broadcasts

Ensure effective communication of your press conference or live broadcast by implementing these modifications.

Supply a Sign Language Interpreter

Provide a sign language interpreter at press conferences. Because many people who are deaf watch the press conference on television or a live stream on the internet, the interpreter provides the citizen who is deaf the same communication as a hearing citizen.

Videographers should keep the sign language interpreter in the camera frame so that people who are deaf or hard of hearing receive the same information in real time as the general public.

Governor Greg Abbott, center, talks at a lectern while an interpreter, right, who is fully visible, provides American Sign Language communication.

Provide Real-Time Captioning during Live Press Conferences

Provide real-time captioning for people who are hard of hearing, elderly, visual learners, and people who do not know American Sign Language.

Provide Audible Description of Graphics

When information is presented in a visual manner, describe the information for listeners who are blind or have low vision. For example, instead of saying, "all the counties in red should evacuate," say "all the counties in red should evacuate; those counties are Travis, Williamson, Bell and McLennan." A list of shelter locations displayed should also be verbally communicated. Include descriptions for all graphics, charts, or maps displaying emergency information.

Accessible Meetings

When emergency management professionals follow the Whole Community approach and include disability leaders in the planning process, they must ensure that everyone has an equal opportunity to participate. Accessible meetings are also important during any other stage of emergency management, including response and recovery.

General Strategy

Include in the invitation clear information about the meeting's accessibility, including:

- the accessibility of the meeting's location,
- how to request services for the meeting (e.g., Braille, sign language interpreters, readers),
- accessible means to respond to the invitation (e.g., telephone, TTY, text messaging, email).

Provide a written agenda.

Write key points from the presentations and discussion on a blackboard or easel-mounted pad. This helps everyone follow the meeting's proceedings.

Consider including this information in your meeting invitation:

"You may request communication accommodations (for example, braille, CARTS service sign language interpreters, readers) or disability support needs by [date]. Call xxx-xxx-xxxx using the relay option of your choice or email the conference or training point of contact at [include email address]."

Considerations for People with Disabilities

These three components are the most important to presenting meetings that are accessible to people with disabilities:

The location of the meeting: People attending a meeting are concerned about where to find parking, the building entrance, the meeting room, and restrooms. Accessible meeting locations are of primary importance to people with mobility disabilities; accessible locations also ensure easier movement for people who are blind or have low vision. Minimum requirements for an accessible temporary event include the following accessible elements:

- parking
- route to the building entrance from accessible parking spaces, drop-off areas and other accessible elements (e.g., route from a bus stop) within the site
- building entrance
- route to the meeting room
- meeting room
- restrooms

How the meeting room furniture is arranged: An accessible floor plan is one in which:

- people who use mobility devices (for example, wheelchairs, scooters, walkers, crutches, canes) can maneuver throughout and use the amenities independently;
- people who are blind or have low vision can navigate easily and safely;
- people who are deaf or have hearing loss can use assistive listening systems and see speakers, interpreters, and captioning;
- all participants feel comfortable and ready to be engaged in discussion.

How the meeting information is communicated:

- Before the meeting takes place, address how to provide such services as interpreters, real-time captioning, and note takers.
- At the beginning of the meeting, ask all participants to introduce themselves. This not only serves as an ice-breaker, but also lets people who are blind or have low vision know who is at the meeting.
- Ask participants to talk one at a time and identify themselves during the discussion so that participants who are blind or have low vision know who is speaking. The real-time captioner or the interpreter will translate this information for participants who are deaf or have hearing loss.
- If a presentation includes audiovisual elements (like a PowerPoint presentation, video, or printed charts and graphics):
- Someone needs to describe the visuals for people who are blind or have low vision. This audio description does not have to be presented separately. The speaker can describe visuals as part of her lecture.
- If the presentation is provided to participants in print, the handouts must also be accessible.
- Caption or interpret the audio portion of the narration for guests who are deaf or have hearing loss. Where there is no captioning on the audiovisual itself, interpreters or real-time captioners can help supply the text.

This information comes from a Department of Justice Americans with Disabilities Act webpage about setting up your meeting room and providing accessible information for all participants.

Accessible Documents and Websites

Many software programs have built-in accessibility tools. This section gives you a brief overview about how to use them, as well as resources for further training.

Guidelines for All Documents and Websites

This first section of guidelines applies to all documents and websites.

Use System Fonts

Avoid custom fonts because assistive technology will not read them properly.

Make forms electronically fillable.

Paper forms are inaccessible to some individuals with disabilities. Forms that can be completed using a computer, smart phone or other digital technology are more likely to be accessible for most individuals and may still be printed after being electronically completed.

Choose an Accessible Technology Platform

When adopting information and communications technology, be sure it follows accessibility standards and meets the Web Content Accessibility Guidelines (WCAG) 2.0. Many technology vendors who sell their products to the public sector provide a voluntary product accessibility template that serves as a disclosure to document the accessibility of their product and identify specific accessibility issues.

Present Text as Text

Word Art, bmp files, jpg files and scanned documents of text are images, not text. Assistive technology cannot read image-based files.

Include Alternative Text

Alternative text, also known as "alt text," appears when you move your cursor over a picture or object. Alt text helps people who use screen readers understand the content of images in your document. For many readers, alt text is the only available information about the images and objects in your document.

Because screen readers cannot interpret images, a person who is blind would have no way of knowing whether the image is an decorative element or logo, artwork, link to another page, or something else. Adding a line of hidden computer code to label the photograph "Photograph of Mayor Jane Smith" allows the user to make sense of the image.

Include alt text for any of the following objects in your document that convey important information:

- photos or illustrations
- clip art, SmartArt or other graphics
- charts
- tables
- digital handwriting
- shapes (that don't contain text and are not in groups)
- groups (all objects in this list, with the exception of shapes, should also have alt text when in groups)
- embedded objects

Use Styles

Heading and paragraph styles make it easier for all readers of your document to follow. In longer documents, these elements add structure for users who are use a screen reader or who rely on the visual cue of section headings to navigate as they read.

Include Tables of Contents

Like heading styles, tables of contents help readers of long documents follow the document's structure and make it easier to navigate.

Use Short Titles in Headings

When you use headings in a document, be sure to keep them short (fewer than 20 words). In general, headings should be, at most, one line long. This makes it easier for readers to quickly navigate the document.

Use Logical Heading Order

Use heading levels in a logical order to assist users in navigating the document and finding information. For example, Heading 4 should be a child of Heading 3, not Heading 2.

Use Meaningful Hyperlink Text

Hyperlink text should provide a clear description of the link destination, rather than only providing the URL. Avoid hyperlink text like "click here" or "read more." Instead, use a descriptive phrase like Create Accessible Documents and Websites.

Increase Visibility for Colorblind Viewers

Colorblindness is the inability to distinguish one or several colors. Colorblindness is independent of the capacity for distinguishing light and shade. It affects a significant number of people, most often as an inability to distinguish between red and green, or seeing red and green differently.

When creating documents and presentations, it's important to choose elements that increase visual contrast so viewers who cannot rely on color distinction can still understand what they're seeing. Avoid using color alone to distinguish meaning.

A common example is "All items marked in red are required." Instead, indicate "All items marked with an asterisk are required." People who are colorblind understand symbols more accurately than colored text.

Some things you can do when creating a document include:

- Avoid the use of orange, red, and green.
- Use texture instead of color in graphs or to highlight points of interest.
- Keep the overall contrast in your presentation high.

Use Simple Tables

Make your data predictable and easy to navigate by avoiding nested tables and merged or split cells inside of tables. Complicated tables are difficult for users to navigate with a screen reader because the order of the table cells is unpredictable.

Avoid Repeated Blank Characters

Extra spaces, tabs and empty paragraphs may be perceived as blanks by people using screen readers. After hearing "blank" several times, those users may think that they have reached the end of the information. Instead, use formatting, indenting, and styles to create whitespace.

Avoid Floating Objects

Objects that are not in line with text are challenging to navigate, and they might be inaccessible to users with vision impairments. Set text-wrapping around objects to **Top and Bottom** or **In Line With Text** to make it easier for people with screen readers to follow the structure of your document.

Create Closed Captions

If you use additional audio or video components in a document or workbook, ensure that the content is available in alternative formats such as closed captions, transcripts or alternative text equivalents for users with disabilities.

Print Files in Large Text

Provide a standard-text and large-text version of the message. For the large-text version, use the following guidelines:

- Use 20 pt. or larger Verdana or a similar san serif font.
- Exaggerate color, saturation and contrasting colors between foreground and background.
- When printing, consider using a contrasting background color, such as ecru or off-white.

Modifications for Excel and Tables

Name Sheet Tabs

In Excel, worksheet names should provide information about what the worksheet contains. Naming worksheets makes workbook navigation easier. Remove any blank sheets in a workbook.

Avoid Blank Cells, Rows or Columns

Using blank cells, rows, or columns to format your table or spreadsheet can mislead someone using a screen reader. Blank areas can imply that the table contains no more information. You can fix this by deleting unnecessary blank cells, rows or columns. If your table is used specifically to layout content within your document, you can clear all table styles.

Identify Column Headers

Create descriptive column headings to provide context and assist users navigating the table’s contents.

Zebra Stripe Alternate Rows

Help people navigate across table rows by striping alternate rows. Use a shading color that maintains enough contrast with the font color to ensure visibility of the text.

Modifications for PowerPoint Files

In addition to the techniques for all document types, incorporate these strategies when building PowerPoint presentations. If they include audio, video, or embedded information, also provide the modifications described in the multimedia section.

Title Each Slide

Slide titles are used for navigation and selection by people who are not able to view the slide.

Ensure Logical Slide Reading Order

People who cannot view the slide will hear slide text, shapes, and content read back in a specific order. If you are using objects that are not part of the slide template, it is important that a screen reader will read them in logical order.

Highlight Information Effectively

Circle or use animation to highlight information. Laser pointers or color highlights aren't as effective, because they might not be visible to people who are colorblind.

File Formats

Word and PowerPoint Versions

The ".docx" and ".pptx" formats are the default file format for documents and files created in Word 2007 and newer or PowerPoint 2007 and newer. The formats have some advantages (such as smaller file size), but they are not supported as widely as the old ".doc" or ".ppt" formats.

Converting the new formats to the old can destroy some content. Consider saving files in both the old and the new versions to ensure that more people can open them.

Convert Word to PDF

Converting Word documents to PDF files is convenient way to preserve formatting and accessibility information. You must follow these steps to convert the document correctly, however.

Convert PowerPoint to PDF

If you want to display PowerPoint presentations on the web, convert them to PDF format. PDFs are better than PointPoints because:

- the file size is relatively small;
- distracting slide transitions are removed;
- most people have PDF readers, while many do not have PowerPoint.

Most importantly, heading structure and other accessibility information will remain intact if you export the file correctly.

Test Office Documents' Accessibility

Beginning with 2010 versions, Word, Excel and PowerPoint include accessibility checkers that allow you to check for accessibility problems. The accessibility checker makes it much easier to identify and repair accessibility issues.

To run the accessibility checker, select File > Info > Check for Issues > Check Accessibility.

If you have Word, Excel or PowerPoint from Office 2016, you will find the Accessibility Checker on the Review tab of the Ribbon.

The Accessibility Checkers will show:

- accessibility errors (for example, images with no alternative text),
- warnings (for example, unclear link text),
- tips (for example, slide reading order).

The Accessibility Checker provides feedback about the importance of each item and tips about how to repair it.

Modifications for Websites

For forms, text, and image based content on websites, HTML provides the most support and is the easiest format to make accessible for all.

The Web Content Accessibility Guidelines 2.0 (WCAG 2.0) define how to make Web content more accessible to people with disabilities. WCAG 2.0 is a commonly used and understood International accessibility standard that applies to all technologies deployed through the web including Office documents and PDFs.

Avoid layout tables when creating websites and emails. Layout tables make it hard for screen readers to access the information in them.

Document Accessibility Training

The Texas Governor's Committee on People with Disabilities sponsors the learning modules listed below about making Microsoft Office documents accessible to people with disabilities. A multi-agency team of accessibility professionals created them. The Committee encourages widespread use of these modules by public and private entities.

If you have questions, comments or compliments about these learning modules, please contact GCPD@governor.state.tx.us.

- Accessible Documents Summary
- Microsoft Office 2013 and 2016 tutorials
- Microsoft Office 2010 tutorials
- Microsoft Office 2007 tutorials
- Accessibility/Assistive Technology Training

Chapter 6 contains additional resources about creating accessible documents.

Multimedia

Multimedia refers to any presentation that contains more than one type of media. Multimedia typically includes both audio and visual information. Videos are a common example.

For multimedia to be accessible, you must create equivalent alternatives. Equivalent alternatives provide audio descriptions of essential visual elements for vision-impaired users. Audio description is performed by a narrator who describes what is happening in the film so that people who are blind can perceive the content of the film.

Watch this Community Café video and select the DVS/SAP option for an example of audio description.

Equivalent alternatives also provide visual representations of audible elements for people who are deaf or hard of hearing. Captioning for videos is a good example.

A note about text equivalents: If you post videos or a multimedia presentation, including text transcripts of these files alone does not fulfill accessibility requirements.

Accessible multimedia presentations contain:

- a text equivalent for every non-text element, synchronized to the presentation (for example, include the text equivalent in the content or use alt text);
- open or closed captioning;
- audio descriptions of all visual information necessary for the comprehension of the content, including descriptions of action or expressions;
- media that does not cause a screen to flicker with a frequency between 2 Hz and 55 Hz. (If you have media that contains this type of flashing, strobe lighting, or optical illusions, do not post it. Blinking objects may cause photosensitive epileptic seizures. If you must post this media, include a warning on your web page and do not automatically play the media or show the graphic when your page loads—allow your users to start and stop the media or click to access the graphic if they want to view it.)

Media Players

In order to display videos on your website, you must have a video player.

To be accessible, these media players must follow the guidelines presented at DigitalGov.

Captioning

Captioning is a necessary accommodation for people who are unable to hear the audio portion of a video. It's also helpful for people with cognitive disabilities. Captions transcribe speech and describe sound effects, music or laughter. Captions also identify multiple speakers.

Two types of captioning are available: open captioning and closed captioning.

1. Open captions are words that appear automatically on your video when you hit play; you cannot turn them off.
2. Closed captions don't appear unless you turn them on. You can alsoturn them off.

Closed Captioning for Videos

All videos should have closed captioning. The caption text must be synchronized to the video.

YouTube has a feature that will automatically caption many videos. However, the quality of this automatic captioning is often poor. In order to ensure your captions are correct, you must review automatic captions or manually enter your own captions.

Use Your Own Text to Create YouTube Captions:

1. Upload your video to YouTube.
2. Make the video unlisted.
3. Turn off the automatically created translation.
4. Upload your text transcript.
5. Let YouTube sync the text to the video.
6. Review the captioning to ensure its timing matches the video. Edit it if necessary.

7. Once the video has captions, you might want to download the captioned version to use on other websites. After downloading, you might need to find an online converter to convert your file to the format that your media player supports.
8. Make the video public if you will host it on YouTube.

YouTube offers these videos to help with making your videos accessible.

Software to Play Videos, Audio and Multimedia

If your website falls under Texas or federal web accessibility standards, you might need to link to plugins necessary to access content on your site. For instance, if you make PDFs available for download, you might need to link to the Adobe Reader download page.

Key Areas to Test for Multimedia Accessibility

Web developers should test their content for accessibility before publishing. A list of free or low-cost web development tools is available at the Texas Health and Human Service System accessibility center.

Chapter 6 contains additional resources for creating accessible multimedia.

Social Media

One of the fundamental challenges of emergency management is communicating effectively with the public before, during, and after an emergency. Social media is a powerful means of communication, especially during disaster situations.

Social media allows emergency managers to broadcast messages to the public. Social media also allows engagement with the public – this engagement can both inform managers and leverage the public as an asset in emergency response.

One advantage of using social media is that many users access it via their smartphones. People often keep their phones with them, which means they are likely to have them in an emergency.

Social media has the potential to reach many people who might not use traditional communications. For this reason, emergency managers use it widely as a public address system.

Keep in mind that social media should be used in addition to traditional media (radio, TV, print and internet) to help streamline emergency public information.

The success of a social media message relies on its accessibility to individuals who receive the messages. Social media communications should use plain language, clear English and be developed in accessible formats to support the devices and tools used by the public. As new social media tools are developed, review their accessibility capabilities. Work with community partners that include disability representatives to test accessibility.

Posting Multimedia on Social Media

Some social networking sites that are widely used by the public are not be fully accessible. Your organization might want to use them to provide information anyway.

Many agencies have found that a practical approach to providing accessible content is to post videos and presentations on these sites and also post the same content, in an accessible manner, on their own sites.

Agencies and jurisdictions using social media in times of disaster or for preparedness information should ensure that their messaging accommodates the needs for people with disabilities.

Agencies and jurisdictions should follow the guidance below when creating social media messages.

Modifications for Social Media

This section provides tips, resources and applications to assist with the accessibility challenges of social media.

Twitter

Composing Tweets

Place hashtags or @mentions at the end of the tweet. This allows a screen reader to voice the main content of the tweet more clearly in the beginning, saving the service-specific speak, which can sound confusing, for the end.

If possible, avoid using unfamiliar acronyms that would sound strange if read by a screen reader. If space allows, spell out the acronyms or use a different way to convey the information. If the acronym is well-known and sounds the same when we speak as it's intended to sound (for example, NASA), you don't need to spell out "National Aeronautics and Space Administration."

Use "CamelCase" for multiple words for hashtags; that is, capitalize the first letters of compound words (use #SocialGov, not #socialgov).

If Your Tweet Contains photos, video, or audio:

Put the following prefixes before tweets that have photos, videos, or audio. This allows people using screen readers to know what to expect before it's read out loud. The uppercase formats add further clarity to sighted users.

- Photos: [PIC]
- Videos: [VIDEO]
- Audio: [AUDIO]

Make your tweet serve as a descriptive caption to provide context for the visual or audio element and then link back to the organization website for fully accessible content.

Facebook

When you post a photo or video to Facebook, always include its description to serve as a text alternative.

Also, you should always provide a link back to the accessible organization webpage that hosts a copy of that photo or video.

When you post videos on Facebook, upload your video to your YouTube channel and enable closed-captions. Follow these tips for captioning. Then post a link to your YouTube video as your status update, rather than uploading the video into Facebook. This will ensure that visitors will be taken to the accessible version on YouTube.

YouTube

The Multimedia section of this document describes modifications for YouTube.

Chapter 6 contains additional information about accessible social media.

Audio Files

Recording program materials in an audio file or onto an audio CD is a good alternative to providing written material. Some people who are blind or have visual disabilities cannot or prefer not to read braille and might find audio more useful.

Providing an accessible computer document is often the fastest way to allow people to use a screen reader or other device that allows the document to be read. Computer documents provide an efficient and simple means of converting print information to audible communication. Many people have computers, tablets, and phones with recording and speech output.

If, however, you choose to create audio files, you can send them to people on discs via the postal service or electronically via email.

Agencies and jurisdictions can use staff members to create audio formats in-house. These techniques create the best audio files:

- Record in a room where there is no background noise.
- Read at a moderate pace and articulate words clearly.
- Speak any visible information provided, such as phone numbers, addresses, website URLs, etc.
- Describe images, charts and drawings; (For example, "This pie chart shows that 75 percent...." or "This bar graph shows….").
- Speak slowly and clearly.
- Identify the reader at the end of the recording.
- If the recording has chapters or sections, ensure that the user can navigate them.

Charts, Graphics, Maps, Images & Visuals

When using visual images in your communication, take the following steps to ensure that they are accessible:

- Use high quality pictures that aren't stretched or blurry.
- Use pictures that match and reinforce the text.
- Avoid symbols with unclear meanings.
- Include alt text or a caption to describe what each pictures is communicating. This video demonstrates how to create alt text.

Increase Visibility for Colorblind Viewers.

For people with low vision, choose a color pallet that increases visual contrast between foreground and background colors so that viewers can more easily read and understand content. Some things you can do when developing your materials include:

- Use texture in graphs, instead of color, to highlight points of interest.
- Circle or use animation to highlight information, rather than relying on laser pointers or color.
- Keep the overall contrast in your material high.
- Avoid image watermarks. (If you must use a watermark, make sure that the information it contains is also included elsewhere in your document.)

Chapter 4: Auxiliary Aids and Services

This section describes auxiliary aids and services that will increase the effectiveness of your communication. It is organized by types of disabilities and methods of communication.

- Interpreting Services For People Who Are Deaf or Hard of Hearing
- Phone Calls with People Who Are Deaf, Hard of Hearing or Have Speech Disabilities.
- Auxiliary Aids for People Who Are Blind or Have Low Vision Impaired

In addition, you can access these additional resources in Chapter 6:

- videos that demonstrate personal assistive devices
- project Endeavor videos about technology for people who are deaf and hard of hearing
- additional videos about technology for people who are deaf and hard of hearing
- deafness and hearing loss resource specialists
- deafblind resources

Interpreting Services for People Who Are Deaf or Hard of Hearing

American Sign Language (ASL) Interpreting

Use for: Press conferences, broadcasts, videos, meetings and face-to-face communications.

Sign language interpreters are often the most effective communication method for people who are deaf and use sign language. You can find a registry of Texas certified sign language interpreters here.

Develop contracts with local ASL Interpreter organizations in order to be prepared before an emergency occurs.

When you hire interpreters:

- brief interpreters and provide them with written information about the topic before the event begins. In particular, they should know important names and areas affected;
- if you videotape events, ASL interpreters must stand next to the speaker, so that their faces and upper bodies are in the screen at all times;
- the background behind the interpreter should be a solid color;
- follow the National Association of the Deaf Guidance for Effective Communication at Emergency Press Briefings;

Communication Access Real Time Translation (CART)

Use In: Press Conferences, broadcasts and meetings, announcements in shelters.

Also known as "real-time captioning," CART is a service that can be delivered on location or remotely.

CART uses a stenotype machine, notebook computer and specialized steno translation software to instantly translate the spoken word into English text.

The text produced by the CART provider can be:

- displayed on a computer monitor,
- projected onto a screen,
- combined with a video presentation to appear as captions,
- displayed on other systems.

Texas Video Remote Interpreter (VRI) Services

Use In: Face-to-face communications.

Video Remote Interpreter Services (VRI) is an interpreting service that uses video conference technology over dedicated lines or wireless technology offering a high-speed, wide-bandwidth video connection that delivers high-quality video images. To ensure that VRI is effective, performance standards have been established and training is required for users of the technology.

A list of VRI resources is here.

Phone Calls: People Who Have Hearing or Speech Disabilities.

Telecommunication Relay Services (TRS)

Telecommunications Relay Service (TRS), established under Title IV of the Americans with Disabilities Act, is a telephone service that allows people with hearing or speech disabilities to place and receive telephone calls. TRS is available for local and/or long distance calls in all 50 states, the District of Columbia, Puerto Rico and U.S. territories. TRS is regulated by the Federal Communications Commission and there is no cost to the TRS user.

Agencies and jurisdictions should respond to TRS calls as they would any other telephone call.

TRS uses operators, called communications assistants (CAs), to facilitate telephone calls between people with hearing and speech disabilities and others. Either a person with a hearing or speech disability or a person without such a disability may initiate a TRS call.

There are several forms of TRS, depending on the particular needs of the user and the equipment available.

1. **Text-to-Voice TTY-based TRS**—This type of TRS is the "traditional" method for people with speech or hearing disabilities to communicate over the phone. To use it, a person with a hearing or speech disability uses a Text Telephone (TTY) to call the CA at the relay center. TTY users type both the number they wish to call and their telephone conversations onto the TTY's keyboard. The attendant at the relay center then makes a voice telephone call to the other party, and relays the call back and forth between the parties by speaking what a text user types, and typing what a voice telephone user speaks. The text is displayed on a screen or printed on paper for the TTY user to read.
2. **Voice Carry Over (VCO)**—VCO is technology for people with hearing disabilities who speak using their own voices. They can speak directly to the called party and receive responses in text from the call attendant. The party who is deaf or hard of hearing does not type

when using VCO. This service is particularly useful for senior citizens who have lost their hearing but can still speak.

3. **Hearing Carry Over (HCO)**— (HCO) is for people with speech disabilities who are able to hear. They listen to the party without a hearing disability and type their parts of the conversation on a TTY. The call attendant reads these words to the other party.
4. **Speech-to-Speech (STS)**—STS is for people who have speech disabilities. A call attendant who is trained in understanding a variety of speech disorders repeats what the person with a speech disability says in a manner that makes the his or her words clear and understandable to the other party. No special telephone is needed. For more information regarding STS, visit the FCC Guide to speech-to-speech relay.
5. **Shared Non-English Language Relay Services**—Due to the large number of Spanish speakers in the United States, the FCC requires interstate TRS providers to offer Spanish-to-Spanish traditional TRS. Although Spanish language relay is not required for intrastate (within a state) TRS, many states with large numbers of Spanish speakers offer this service on a voluntary basis. Texas is one of those states.
6. **Captioned Telephone Service (CTS)**—CTS, like VCO, is used by people with hearing disabilities who have some residual hearing. CTS telephones have text screens that display captions of what the people they are speaking to say. A captioned telephone allows the user to both speak to and listen to the other party and, at the same time, read captions of what the other party is saying.

There is a "two-line" version of captioned telephone service that offers additional features, such as call-waiting, last call return, call forwarding, and direct dialing for 9-1-1 emergency service. Unlike traditional TRS (where the CA types what the called party says), the CA repeats or re-voices what the called party says. Speech recognition technology automatically transcribes the CA's voice into text, which is then transmitted directly to the user's captioned telephone text display.

The following forms of communication depend on working Internet access.

7. **Video Relay Service (VRS)—**This Internet-based form of TRS allows people whose primary language is American Sign Language (ASL) to

communicate with the CA in ASL using video conferencing equipment. The CA speaks what is signed to the non-ASL party, and signs that party's response back to the caller. VRS is not required by the FCC, but is offered by several TRS providers. VRS allows conversations to flow in near real time and in a faster and more natural manner than text-based TRS. TRS providers that offer VRS must provide it 24 hours a day, seven days a week, and must answer incoming calls within a specific period of time. For more information regarding VRS visit video relay services.

8. **Internet Protocol (IP) Relay Service**—IP Relay is a text-based form of TRS that uses the Internet rather than traditional telephone lines for the leg of the call between the person with a hearing or speech disability and the CA. Otherwise, the call is generally handled just like a TTY-based TRS call. The user may use a computer or other web-enabled device to communicate with the CA. IP Relay is not required by the FCC, but is offered by several TRS providers. The FCC provides more information about this service.
9. **IP Captioned Telephone Service**—IP captioned telephone service combines elements of captioned telephone service and IP Relay. IP captioned telephone service can be provided in a variety of ways, but uses the Internet – rather than the telephone network – to provide the link and captions between the caller with a hearing disability and the CA. It allows the user to simultaneously listen to and read the text of what the other party on the call says. IP captioned telephone service can be used with an existing voice telephone and a computer or other Web-enabled device without requiring any specialized equipment. For more information regarding IP captioned telephone service, visit Internet Protocol Captioned Telephone Service.

The FFC provides further information on Telecommunications Relay Services.

Relay Texas is a service that provides telephone access for people in Texas who have speech or hearing loss and find it challenging or impossible to use a traditional telephone. Chapter 6 provides information about how to use Relay Texas.

For People Who Are Blind or Have Low Vision

Audio Conversion

Use for: written documents.

Recording program materials into an audio file or onto a CD or DVD is a good alternative to providing written material. Some people who are blind or have visual disabilities cannot or prefer not to read Braille or large print, and find audio and/or tapes more useful.

Staff members can create audio formats within their organizations by using these tips:

- Record in a room where there is no background noise.
- Read at a moderate pace and articulate words clearly.
- If the recording has chapters or sections, ensure that the user can navigate them.

You can send discs to people via post or send the audio file via e-mail. Addition information about audio files is available in Chapter 3.

Screen Readers

Use for: electronic documents.

Computer documents provide an efficient, simple means of translating print information to audible communication. Many people have computers, tablets and phones with recording capabilities and voice output. An accessible computer document is often the fastest way to give people who are blind or have visual impairments access to a document.

A screen reader or other device can read these accessible documents. Screen readers are software programs that allow users who are blind or have low vision to read the text that is displayed on the computer screen with a speech synthesizer or braille display. A screen reader is the interface between the computer's operating system, its applications, and the user. (From the American Foundation for the Blind.)

Braille Conversion

Use for: paper documents.

Braille is a form of effective communication with people who are blind. Not all people who are blind can read braille, however.

If you need emergency documents in braille, it is a good strategy to print them in advance of the incident.

The easiest way to create braille documents is to compose the information you'd like to communicate in a Microsoft Word accessible document. Next, you'll import your document into braille translation software like Duxbury. Finally, you will use a braille embosser to create the braille document.

Embossers are expensive. It might be more cost effective to send your files to a braille transcription service. See the appendix for a list of resources.

You should know that braille documents are longer than printed text because the size of braille letters is larger than printed letters.

Chapter 5 Tools for Communicating during a Disaster

Use the following guidance as a general model for first responders rather than an exhaustive collection of everything you need to know about interacting with people who have disabilities.

While many of the tips below refer to evacuation and sheltering, they apply to communications in a wide variety of settings.

You should always ask the person you are interacting with about the best way you can help.

General Etiquette

When you meet and communicate with people who have disabilities:

- Treat all people who have disabilities with respect and courtesy.
- Offer to shake hands. People with limited hand use or who wear an artificial limb can usually shake hands. Shaking hands with the left hand is also an acceptable greeting.
- If you offer assistance, wait until the offer is accepted, then listen to or ask for instructions.
- Treat adults as adults. Address people who have disabilities by their first names only when extending the same familiarity to all others.
- Relax. Do not be embarrassed if you happen to use common expressions such as "See you later," or "Did you hear about that?" that seem to relate to a person's disability.
- Do not be afraid to ask questions when you are unsure of what to do.
- Everything from facial expression and tone of voice to posture and demeanor is part of your communication.

People Who Are Older

People who are older than 65 are more likely than the general population to acquire disabilities as they age. You will need more staff with knowledge about disabilities to help older adults during emergencies than you will for the general population. After assessing whether they have disabilities, the information below might help you assist people who are older during an emergency.

- Some people might respond slowly to a crisis and not fully understand the extent of the emergency. Repeat questions and answers if necessary. Be patient. Taking the time to listen carefully or to explain again can take less time than dealing with a confused person who might not be willing to cooperate.
- Reassure the person that he or she will receive medical assistance without fear of being placed in a nursing home.
- Older people might fear being removed from their homes; be sympathetic and understanding and explain that the removal is temporary.
- Before moving a person, assess his or her ability to see and hear; adapt rescue techniques to accommodate sensory impairments.
- People with hearing loss might appear disoriented and confused when the only problem is that they cannot hear you. Determine if the person has a hearing aid. If they do, ask them whether it is available and working. Try to get a new hearing aid battery if they need one.
- If the person has a vision loss, identify yourself and explain why you are there. Invite the person to hold your arm and then guide him or her to safety.
- If possible, gather all medications before evacuating. Ask them which medications they are taking and where their medications are stored. Most people keep all their medications in one location in their homes.
- If the person has dementia, turn off emergency lights and sirens if possible. Identify yourself and explain why you are there. Speak slowly, using short words in a calming voice. Ask yes or no questions and repeat them if necessary. Maintain eye contact.

People Who Use a Service Animal

Some people with disabilities use service animals for guidance, informational, and mobility purposes. The following information will help emergency personnel understand how to interact with service animals.

- Service animals are dogs or miniature horses that assist people with disabilities. While one common example is guide dogs that assist people who are blind, there are many types of service dogs trained to assist people with various disabilities. The ADA Guidance on Service Animals has more information.
- An Emotional Support Animal (ESA) is an animal that provides therapeutic benefit to a person with a disability. ESAs do not require any specific training. The mere presence of the animal is enough to provide some benefit to the person with a disability. Federal and state governments are still developing sheltering policies for ESAs. It is recommended that an ESA be treated like a service animal and allowed to accompany the person with a disability whenever it is possible to do so without compromising safety or sterile conditions.
- A service animal is not a pet. Service animals are allowed to go anywhere a person can go, including food preparation and medical areas.
- Do not touch or give the animal food or treats without the permission of the owner.
- When an animal is wearing its harness, it is on duty. If the animal owner asks you to hold it, hold the leash and not the harness.
- Evacuate the animal with the owner. Do not separate them.
- Service animals are not required to be registered and there is no proof required that the animal is a service animal. If the person tells you it is a service animal, treat it as such. You may ask two questions about the animal:
    - Is the service animal required because the person has a disability?
    - What type of work is the service animal is trained to perform?
- If the animal presents a health and safety issue to the individual or others, you do have the flexibility to remove it from the site. Remember though, that in disasters, animals are also nervous and

anxious; take all considerations into your decision before removing a service animal from its owner. (For example, if a person steps on a dog's tail in a crowd, the dog's aggressive reaction could be considered normal.)

- People are not required to provide proof of disabilities that require a service animal. If you have doubts, wait until you arrive at your destination and address the issue with the supervisors in charge.
- A service animal must be in a harness or on a leash, but does not need to be muzzled.

People Who Have Mobility Impairments

Use the following guidelines when helping people who have mobility impairments:

- Always ask the person how you can help before attempting any assistance. Each person and each disability is unique. Even though it might be important to evacuate the person, respect their independence to the safest extent possible.
- Don’t make assumptions about the person’s abilities.
- Ask if they have limitations or problems that affect their safety.
- Some people might need assistance getting out of bed or out of a chair, but can then proceed without assistance. Ask before acting.

Questions you might find helpful:

- Are you able to stand or walk without the help of a mobility device like a cane, walker, or a wheelchair?
- You might have to stand or walk for quite a while on your own. Will this be ok? Please be sure to tell someone if you think you need assistance.
- Are you able to use your arms fully?

People Who Use Crutches, Canes or Other Mobility Devices

When a person walks with an assistive device like crutches, canes or Segways, you can help by using the following guidelines:

- Do not interfere with the person's movement unless asked to do so, or the nature of the emergency is such that absolute speed is the primary concern. If this is the case, tell the person what you'll need to do and why. Offer assistance if needed.
- A person using a mobility device may be able to negotiate stairs independently. One hand grasps the handrail while the other hand uses the mobility device. If the stairs are crowded, assist by helping to create space for the individual to move into.

People Who Use a Wheelchair

When helping a person who uses a wheelchair, use the following guidelines:

- If the conversation will take more than a few minutes, sit down to speak at eye level.
- People who use a wheelchair are familiar with special techniques to transfer themselves from one chair to another. Depending on their upper body strength, they might be able to do much of the work themselves.
- Ask before you assume you need to help. Ask before you assume what that help should be.

People Who Have a Mental Illness

You might not be able to tell if a person has a mental illness until you have begun the evacuation procedure. The following guidelines will help you be an effective responder:

- In an emergency, the person might become confused. Speak slowly and in a normal speaking tone.
- Ask the person's name. Address him or her by name throughout the emergency response.
- If the person becomes agitated, help him or her find a quiet corner away from the confusion.
- Keep your communication simple, clear and brief.
- If a person is confused, don't give multiple commands; ask or state one thing at a time.
- Be empathetic. Show that you have heard the person and care about what he or she has told you.
- Be reassuring.
- If the person is delusional, don't argue with him or her or try to talk the person out of it. Just let the person know you are there to help him or her.
- Ask if there is any medication he or she should bring.
- Try to avoid interrupting a person who might be disoriented or rambling. Let him or her know that you both have to evacuate the area quickly.
- Don't talk down to the person, yell, or shout. These behaviors can escalate delusional behavior.
- Have a forward leaning body position to show interest and concern. Use open palms and avoid balling your hand into a fist.

People Who Have a Cognitive Disability

The following guidelines and tips will help you to help people with cognitive or intellectual disabilities:

- Activity and noise can distract some people.
- Be prepared to repeat what you say, orally or in writing.
- Offer assistance and instructions and allow extra time for decision making.
- Be patient, flexible and supportive. Take time to understand the individual and make sure the individual understands you.

Say:

- My name is___. I am here to help you, not hurt you.
- I am a _____ (name your job).
- I am here because (explain the situation).
- I look different than my picture on my badge because____ (for example, if you are wearing protective equipment).

Show:

- your picture identification badge (as you say the above);
- that you are calm and competent.

Give:

- extra time for the person to process what you are saying and to respond;
- respect for the dignity of the person as an equal and as an adult (for example: speak directly to the person);
- an arm or elbow to the person to hold as they walk;
- quiet time to rest if possible to lower stress/fatigue.

Use:

- short sentences;
- simple, concrete words;
- accurate, honest information;

- pictures and objects to illustrate your words. Point to your ID picture as you say who you are, point to any protective equipment as you speak about it.

Predict:

- What will happen (simply and concretely)
- When it will happen (tie to common events in addition to numbers and time, for example
    - By lunch time
    - By the time the sun goes down___."
- How long will it be before things return to normal (if you know).
- When the person can contact/rejoin loved ones (for example: calls to family, re-uniting pets).

Ask and look for:

- An identification bracelet with special health information.
- Essential durable equipment and supplies (for example, wheelchair, walker, oxygen, batteries, communication devices like head pointers, alphabet boards, speech synthesizers, etc.).
- Medication.
- Mobility aids (for example, assistance or service animal).
- Special health instructions (for example, allergies).
- Special communication information (For example, is the person using sign language?)
- Contact information.
- Signs of stress and/or confusion. (For example, the person might say she or he is stressed, look confused, withdraw, or start rubbing their hands together.)
- Conditions that people might misinterpret. (For example, someone might mistake a person with Cerebral Palsy or low blood sugar for a person with diabetes or drunkenness.)

Repeat:

- Reassurances (for example, you might feel afraid. That's all right. We're safe now.)

- Encouragement (for example, Thanks for moving fast. You are doing great. Other people can look at you and know what to do).
- Frequent updates on what's happening and what will happen next. Refer to what you predicted will happen, for example: "Just like I said before, we're getting into my car now."

Reduce:

- Distractions. For example: lower volume of radio, use flashing lights on vehicle only when necessary.

Explain:

- Any written material (including signs) in everyday words.
- Public address system announcements in simple words.

Share:

- The information you've learned about the person with other workers who'll be assisting the person

People Who Have a Speech Impairment

Use the following guidelines when you are helping someone with a speech impairment:

- If you do not understand something the individual says, do not pretend that you do. Ask the individual to repeat what he or she said and then repeat it back.
- Be patient. Take as much time as necessary.
- Try to ask questions that require only short answers or a nod of the head.
- Concentrate on what the individual is saying.
- Do not speak for the individual or attempt to finish her or his sentences.

People Who Have Autism

Use the following guidelines when you are helping someone who has autism:

- The person with autism might or might not be able to communicate with words. Approach this person gently and speak to him or her to softly. High levels of sensory input may cause agitation.
- A person with autism might become stressed when his or her regular routine is disrupted.
- Unless absolutely necessary, don't touch someone with autism without the person's permission. Many people with autism are very sensitive to touch and simple touch can be painful.
- Understand that rocking, repetitive motion, and repeating words or phrases can be comforting to a person with autism during an emergency.
- Avoid loud noises, bright lights, and high levels of activity whenever possible.
- Don't assume that a person does not understand if they are not using words.

People Who Are Deaf or Hard of Hearing

There is a difference between people who are hard of hearing and those who are deaf. The effects of hearing loss vary depending on the severity and time of onset. Likewise, the methods for communication vary as well. Some people are completely deaf and rely on various forms of visual communication, while others can hear very well with hearing aids.

Hearing aids do not, however, guarantee that the person can hear and understand speech. Hearing aids increase volume, not clarity. Many individuals with hearing loss can speak even though they cannot hear.

You can communicate most effectively by asking the person which communication methods work for him or her.

For people who are deaf and communicate mostly using sign language, interpreters are appropriate. For individuals who are hard of hearing and do not sign, some common communication methods include amplification (hearing aids and/or personal FM systems) and written text (Relay, captions, Computer Assisted Real-time Transcription, etc.).

General tips for Communicating

The following tips will allow a person with hearing loss to effectively use what hearing they have (if any) and use visual cues to receive as much information as possible. Some people with hearing loss have difficulty knowing where a sound is coming from. Others hear sounds, but might not be able to recognize the words that were spoken. All of these tips are easy to do, but might require a conscious effort at first.

- Ask the person what will make communication easier.
- Choose a quiet environment, when possible. Be aware of office machines, fans, restaurant noise, and other people's conversations.
- Avoid standing in front of a light source. Make sure the light is shining on your face, not behind you.
- Make sure you have the person's attention before speaking. Waving a hand, or a gentle touch on the shoulder or arm, is an acceptable way to get attention.
- Stand a normal distance from the person.

- Do not cover your mouth when you are speaking. This includes covering your mouth with a hand or a long mustache.
- Do not have anything in your mouth when you are speaking.
- Look directly at the person you are speaking to and maintain eye contact. Avoid filling out forms or reading while talking.
- State the topic of discussion as you begin. When you change the topic, make sure the listener is aware of the new topic.
- Speak clearly, at a normal pace. If you tend to speak quickly, slow down. Do not overly exaggerate or slow your speech at first. If the person has difficulty understanding, slow your speech more, break the sentences into smaller portions, and check for understanding again.
- Speak naturally and with normal expression.
- Use open–ended questions to check for understanding.
- Repeat the statement, then rephrase if the person is unable to hear the words spoken.
- Use shorter, simpler sentences if necessary.
- Do not shout. A loud voice may increase distortion or give the impression you are angry, without improving comprehension. If a person is deaf, your voice will not be heard clearly, no matter how loud.
- When communicating alerts, warnings & notifications door-to-door, ring the doorbell, pound on the door and shine a flash light into a window. Some people who are deaf have special "doorbells" that set off a different and visual alert, such as a blinking light. Pounding on the door or shining a light into a window can be more effective than simply knocking because people that can't hear a knock might respond to the vibration or light.
- Be patient and take time to communicate. Saying "never mind" or "it's not important," causes the person with hearing loss to feel they are not important. Be aware of fatigue. People who are deaf, hard of hearing, or deaf-blind must work harder to communicate. This can be extremely tiring.
- Remember that hearing loss does not equate with loss of intelligence.
- Remember that even if a person can hear your voice, he or she might not be able to understand your words. Hearing loss can cause distortion in the way sounds are perceived.

- In groups, make sure only one person at a time is talking. Whoever speaks should be sure to have the attention of people with hearing loss.
- Do not assume that a person with a hearing loss is able to understand casual conversation taking place in the room.
- Don't be afraid to make mistakes. Most people who are deaf are very comfortable communicating with those who are hearing. Most will appreciate any attempt to communicate, even if you use the wrong sign.
- It is natural for people who can't communicate to feel frustrated or to become excited in emergency situations. Don't misinterpret a frustrated expression as anger at you.

Communicating with People Who Do Not Use Sign Language

- If communication is difficult, try writing down a couple of words or a phrase. Keep sentences simple. Offer pencil and paper. When writing back and forth, keep word choices simple, sentences short, and use present tense. If the person understands you well and uses more complex sentence and vocabulary, you may do the same. Take your cue from the individual.
- For a person who is late deafened and who does not sign, a computer or other electronic device can be a useful communication tool. Enlarge the font so it is easy to read. Let the individual speak, and if they don't understand your speech, type and allow the person to read the computer screen.

Communicating with People Who Use Sign Language

- When using an interpreter, maintain eye contact with and speak directly to the person who is deaf.
- Use gesture, facial expression and body language to assist with communication. Use pantomime, body language and facial expression. Patience and kindness will also aid communication.
- Do not shout. If a person is deaf, your voice will not be heard clearly, no matter how loud you speak.

Effective Communication at Shelters

Work with your local community of people with hearing loss and consider the tools and techniques below:

Written Communication

- Not all individuals will be able to read English well enough to understand written instructions.
- Keep instructions simple, using basic vocabulary and the present tense.
- Print legibly.

High Tech Communication Tools

- Use hand held mobile devices to text back and forth.
- Deliver general announcements via text blast or email.
- Share a computer to facilitate written communication. (Use large font for people who have visual impairments)
- Use communication tools that people bring with them.
- Establish video remote interpreting (VRI) services for those who use sign language. The best practice is to have qualified interpreters on-site; however, during disasters, remote interpreter services might be the best or only option.

Low Tech Communication Tools

- Use pen and paper to clearly and legibly print information
- Carry white boards that contain announcement information written in large print through the shelter area.
- The American Red Cross Visual Language Translator for Emergency Assistance booklet contains communication boards with photos that people can point to to express their needs. Purchase the communication boards here.
- The Basic Emergency Sign Language Poster can facilitate communications with people who speak sign language.
- Pictograms facilitate communications with people who are deaf, have speech impairments or don't speak English.

- Print general instructions in large font and in braille. Have common materials (brochures, flyers, forms, announcements, etc.) prepared in advance, when possible.

People Who Are Blind or Have Low Vision

The following guidelines will help you be an effective responder for people with blindness or low vision:

- There is a difference between low vision and blindness. Some people who are legally blind have some sight, while others are totally blind.
- Announce your presence, speak out, and then enter the area.
- Speak naturally and directly to the individual.
- Do not shout.
- Don’t be afraid to use words like see, look, or blind.
- State the nature of the emergency and offer them your arm. As you walk, advise the individual of any obstacles.
- Advise the person when you are about to turn left or right, and when you are about to ascend or descend stairs.
- Offer assistance but let the person explain what help is needed.
- Do not grab or attempt to guide a person without first asking.
- Let the person grasp your arm or shoulder lightly for guidance.
- A person may choose to walk slightly behind you to gauge your body’s reactions to obstacles.
- Be sure to mention stairs, doorways, narrow passages, ramps, etc.
- When guiding someone to a seat, place the person’s hand on the back of the chair.
- If leading several individuals with visual impairments, ask each to guide the person behind him or her.
- Remember that you’ll need to communicate any written information orally.
- When you have reached safety, orient the person to the location and ask if any further assistance is needed.
- Print general instructions in large font and in braille. Have common materials (brochures, flyers, forms, announcements, etc.) prepared in advance, when possible.
- Record announcements or information and provide access to the recordings for people who need them.

Low Vision Font Sizes

Use the font examples below and work with the individual to determine the most appropriate font size for his or her vision.

Text should be produced in at least a 12 point and in a sans serif. Sans serif fonts do not have strokes at the end of lines in letters. (This font is not sans serif, for example.)

The following illustrates the same sentence repeated in Verdana font sizes 12 through 48.
This is Verdana Bold 12 pt. font size.

This is Verdana 14 pt. font size.

This is Verdana 16 pt. font size.

This is Verdana 18 pt. font size.

This is Verdana 20 pt. font size.

This is Verdana 22 pt. font size.

This is Verdana 24 pt. font size.

This is Verdana 26 pt. font size.

This is Verdana 28 pt. font size.

This is Verdana 36 pt. font size.

This is Verdana 48 pt. font size.

This is Verdana 72 pt. font size.

People Who Are Colorblind

The following guidelines will make documents easier to read for people who are colorblind:

- Choose elements that increase visual contrast so that viewers who cannot rely on color distinction can still understand what they're seeing.
- Avoid using color alone to distinguish meaning.
- Avoid the use of orange, red, and green.
- Use texture instead of color in graphs or to highlight points of interest.
- Keep the overall contrast in your document high.

People Who Are Deafblind

People who are deafblind sometimes have usable speech, vision and/or hearing. Determine if the individual can effectively communicate via speech, American Sign Language (ASL), finger spelling, writing with a dark pen, computer or assistive device communication, or print-on-palm.

People with combined hearing and vision loss may be deafblind, deaf with low vision, or hard of hearing with any kind of vision loss. Let the deafblind person know you are there by a simple touch on the shoulder or arm.

Use the following guidelines to create a respectful and helpful interaction:

- Avoid bright, glaring, and loud environments.
- Identify yourself.
- Communicate directly with the person, even when using an interpreter.
- Do not assume the deafblind person knows where they are or what is going on. Share as much information as possible.
- Always tell the person when you are leaving, even if it is for a brief period of time. Leave them as comfortable and safe as possible. It is good to offer them a chair, table, or wall for an anchor.
- When guiding a person who is deafblind, never place him or her ahead of you. Allow the person to hold your arm above the elbow. It is rarely necessary to "help" the deafblind person sit down or climb stairs. Place their hand on a chair or banister and tell the person that you are approaching an up or down staircase will give the person the information that he or she needs.

Communication with People Who Are Deafblind

If a person who is deafblind indicates that they need sign language assistance for effective communication, attempt to determine which of the following sign language modes provide for their needs. (For information about this, read the Deafblind Interpreting Guidelines.)

Note that not all ASL interpreters are capable of providing this specialized service. Coordinate with interpreter providers to ensure that interpreters with the appropriate skills are requested:

Visual Frame (Box Signing): Signs are made within a confined space or "box," the size of which is individual to the person who is deaf blind. Interpreters' distance from the client also depends upon the client's individual preference. Using this technique allows a client with a limited visual field to see the signs and the interpreter's facial expressions and mouth movements simultaneously.

Close Vision: Same as above, but with interpreter directly in front of client, within very close proximity. This is used when the client(s) have reduced visual acuity, as well as a peripheral vision loss.

Tracking: Client holds the interpreter's wrists to keep signs within the client's field of vision and to gain information from interpreter's movements. This technique is meant to reduce the client's visual fatigue by helping them keep track of where the interpreter's hands are in space.

Tactile Signing: In this technique the client places her/his hands over the hands of the interpreter, in order to read signs through touch and movement. Tactile signing can be taxing for interpreters, and may require more frequent interpreter switches or breaks. The interpreter should supply both auditory and visual information to the client. It is important to determine a seating arrangement that is comfortable to both the client and the interpreter. Tactile signing is used by clients who have very limited vision and by those who are blind.

Tactile Fingerspelling: The DeafBlind Alphabet is a two–hand manual alphabet (the one used in British Sign Language) adapted to fingerspell letters onto the palm of the client's hand. Most people who are deafblind in the United States use the standard American Manual Alphabet, however, interpreters may encounter clients who know and prefer the DeafBlind Alphabet.

Shortcut Signs: Key signs that can be signed onto palm of client's hand are used as a supplement to tactile finger spelling; generally used in English word order.

The sign language alphabet: This alphabet can be used to spell a word visually or tactually. To "fingerspell" to an individual who is unable to see your letters, you can sign the letters into the palm of the person's hand.

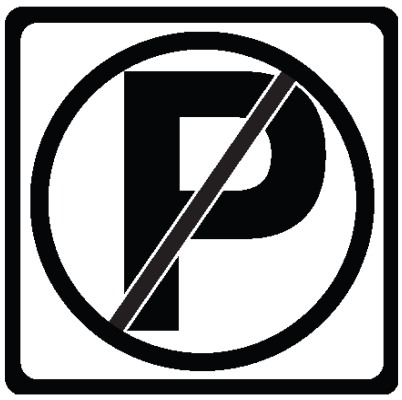
In an Emergency: If an emergency situation happens and you must notify a deafblind person quickly, draw "X" on deafblind person's back with your finger and lead them by the arm. "X on the back" is a universal deafblind sign for an emergency. (If their back is not available, draw X in their palm.)
Note: This is used in the culturally DeafBlind community. People who have vision and hearing loss but are not a member of that community will not understand this cue. You may, however, establish this as a quick emergency cue with them.

Find resources for communicating with people who are deafblind here.

Visual Communications

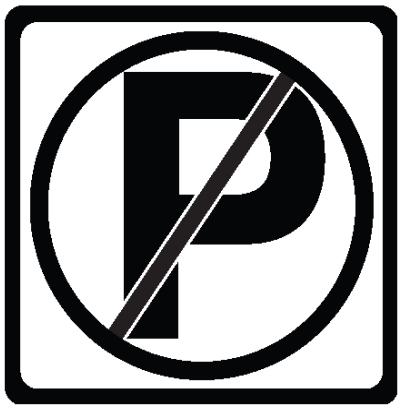
Pictograms

The following are example pictograms for No Parking in Spanish, Chinese and Korean. Double click any of them to see or print more examples and signs in that language.



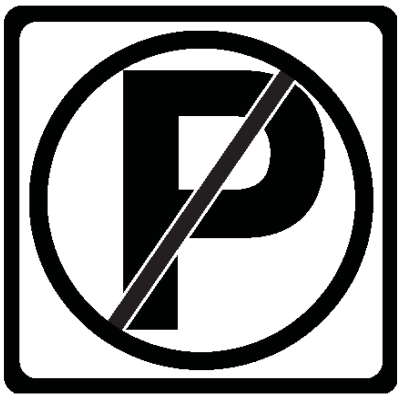
Don't Park Here

No estacionarse



Don't Park Here

禁止停车



Don’t Park Here

주차금지

Signage

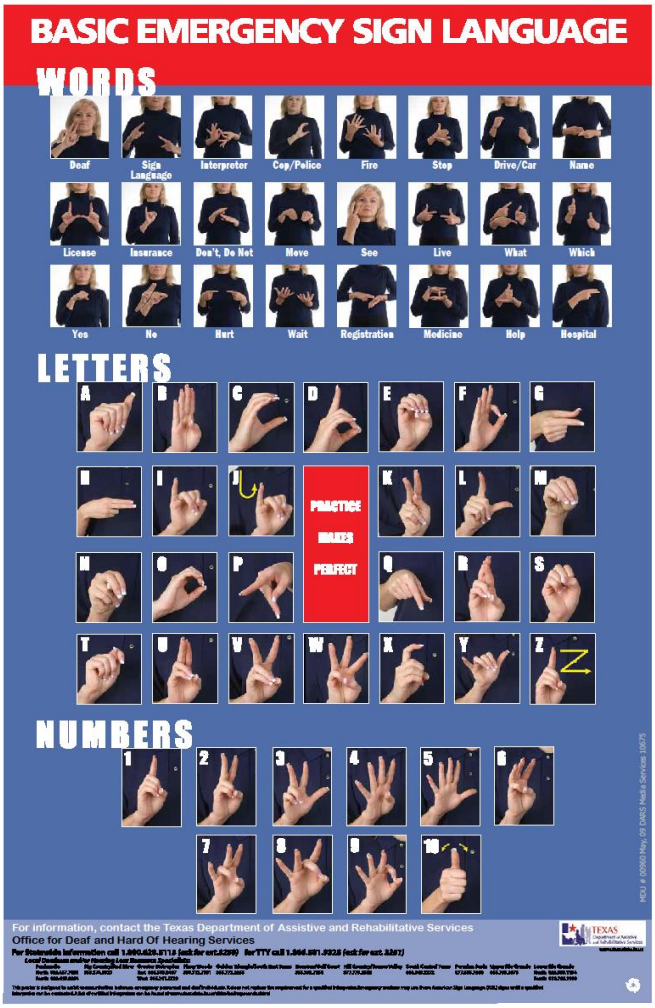
The following is an example of signage for public health screening, shown in English and Spanish. Double click it to see and print more examples.

Public Health Screening

Exámenes de salud pública

Basic Emergency Sign Language

Double click the following for an image of basic emergency sign language gesture and a poster of emergency guidelines for interacting with people who are deafblind. This poster prints on 11x17 paper.



Additional Resources for Emergency Response

Chapter 6 contains the following supplemental resources:

- Reports about disasters and their effects on people with disabilities.
- Teaching fire safety to students with disabilities.
- Emergency response for people who have access and functional needs.
- The Disaster Resistant Communities Group offers videos that deal with sheltering operations for people with disabilities.
- Paratransit Emergency Preparedness and Operations Handbook
- Promising practices from the 2011 FEMA Getting Real Inclusive Emergency Management Conference
- Practical guidelines to help emergency managers and employees plan for workplace emergencies.
- Mobile-friendly tips for first responders.

Chapter 6 Resources and Training Aids

Supplemental Information for Chapter 2

Whole Community Resources

- To learn more about the Whole Community concepts and see examples of it in action, go to Whole Community on the FEMA website.
- Communicating with Vulnerable Populations: A Transportation and Emergency Management Toolkit. This toolkit describes, among many other things, how to use social media to build relationships with members of the whole community and maintain those relationships in order to leverage them when emergencies happen.
- Alerting the Whole Community: Removing Barriers to Alerting Accessibility is a FEMA report that outlines the efforts made to ensure accessibility for people with access and functional needs within the Integrated Public Alert and Warning System (IPAWS). IPAWS works to increase accessibility of alerts for all individuals through multi-modal and geo-targeted dissemination while implementing standards that "developers of accessibility products and services can modify their products and services so end-users will receive alerts issued through the IPAWS system."

Plain Language Resources

Plain Language is an excellent resource for plain language writing. It contains the Federal Plain Language Guidelines, plus links to training, before-and-after examples, and other related information.

You can also find a Plain Language Checklist here.

Supplemental Information for Chapter 3

Accessible Documents

- Texas Health and Human Services Accessibility Center for Electronic Information Resources
- Accessible Presentation Quick Reference Guide
- Texas Health and Human Services Classroom Accessibility Materials
- For some specific examples of how to make websites accessible, go to accessible workplace technology.

Microsoft Office: Word

- Accessibility Features in Word
- Creating Accessible Word Documents
- Accessibility Checker Word

Microsoft Office: Excel

- Creating Accessible Excel Workbooks
- Accessibility Checker Excel

Microsoft Office: PowerPoint

- Creating Accessible Power Point Presentations
- Accessibility Checker Power Point
- If you're using PowerPoint 2010, you can download and install the Sub-titling text add-in for Microsoft PowerPoint (STAMP), which lets you easily create closed captions for video and audio in your presentations.

Multimedia Resources

There are many resources on the internet that can assist you in ensuring that your video and multimedia information is made accessible. Below are samples of them. State and Local jurisdiction staff members should become familiar with the accessibility features in programs they use to create video and multimedia information. YouTube has several postings on "How to make… accessible." Encourage staff to view these videos if necessary.

- Caption Videos and Multimedia
- Making Multimedia 508 Compliant and Accessible

- Creating Section 508 Compliant Videos
- How To Add Captions to a YouTube Video
- Google YouTube Add Captions

Social Media Resources

The Internet has many resources to assist you in ensuring that your social media is accessible to people with disabilities. Staff members should become familiar with the accessibility features in social media programs. YouTube has several postings on "How to make ….. accessible." Encourage staff to view these videos.

- FEMA's training course, IS-42: Social Media in Emergency Management discusses using social media to broadcast information and to increase situational awareness for emergency responders.
- The Emergency 2.0 Wiki Accessibility Toolkit offers a crowdsourcing site that pools resources on helping emergency managers and homeland security professionals learn how to make their information/resources accessible to everyone

Integrate Social Media into Emergency Management

Martin Anderson, the Digital Media Manger for the Country Fire Authority, Victoria, Australia discusses the integration of social media into emergency service procedures. Mr. Anderson points out that the three changes in mindset that came with full adoption of social media:

- From "We hold the info the community needs and we expect them to come to us" to "We realize we need to go to the community."
- From "We will decide what the community needs" to "The community will tell us what they need."
- From "The public is a liability" to "The public is a resource."

To see the video of Mr. Anderson, go to emergency management in the social media age.

Supplemental Information for Chapter 4

Personal Assistive Devices

The following videos demonstrate personal assistive devices:

- Introduction to Personal Assistive Devices
- Caption Phones
- Flashing Fire Alarms
- Video Phones
- Voice to Text
- Blind and Low Vision
- Magnifiers
- Tablets
- Laptops
- Wheelchairs
- Power Wheelchairs
- Crutches
- Transportation
- Medical Devices
- Summary/Conclusion of Personal Assistive Devices
- PODD Communication Book
- Computer-Based Communication Device

Communicating with People Who Are Deaf or Hard of Hearing

Project Endeavor

The Video Library on the Project Endeavor website offers many educational videos about technology like:

- Captel,
- IP Relay,
- VRS;
- Real Time Captioning,
- FM or Loop Systems,
- assistive listening devices and
- Cochlear Implant patch cords;

- definitions of communication access terms like Interpreter Agencies and Communication Modes; much more.

These videos will help you understand how people who are deaf or hard of hearing use various types of technology

Additional Video Resources

Select the links below to link to additional videos:

- Video Relay Service on an iPad
- Video Relay Service on Android
- Assistive Listening Devices at Adobe Hearing Center
- Answers, in American Sign Language, to Questions Survivors Ask About Federal Disaster Aid

VRI Service Providers

For information about and contact with VRI Service Providers, go to the links given below:

- Birnbaum Interpreting Services (BIS)
- Deaf Action Center - Shreveport, LA
- DeafLink
- Fluent Language Solutions
- Interp-via-video

Deafness and Hearing Loss Resource Specialists

Deafness and hearing loss specialists are the best resources for getting help with hearing loss, because they

- have the knowledge and communication ability to work with people who are deaf, hard of hearing, and late-deafened;
- can assist local emergency management preparedness efforts by locating local deafness and hearing loss stakeholder groups and local vendors and agencies that provide resources to communicate with and support individuals with hearing loss;
- provide services related to sensitivity training, communication strategies, and assistive technology.

Texas Health and Human Services provides contact information for local deafness resource specialists and local hearing loss specialists.

How to Use Relay Texas

Relay Texas Services provides telephone interpreting service between individuals who can hear and those who are deaf, hard-of-hearing, deaf-blind or speech-disabled. Relay Texas agents have equipment that enables them to hear a speaking caller and also read the text sent by a text telephone (TTY) user.

Either a TTY user or a person using a standard phone may initiate a call through Relay Texas by dialing the relay number 711 or a designated 10 digit number. After dialing Relay Texas, the person initiating the call gives the desired phone number to the Relay Texas Agent, who then dials that number using another phone line. The Relay Agent types the standard phone user's spoken words to the person using the TTY and voices the TTY user's text.

This service is available for Texans 24 hours a day, 365 days a year. There are no restrictions imposed on Relay Texas calls. Texas and United States laws ensure confidentiality for relay users and operators.

- **Speech-to-Speech**

  People with a speech disability can connect to a specially trained agent who can serve as the caller's "voice" and repeat his/her responses to the called party, if necessary. Someone wishing to call a person with a speech disability can also initiate a call to Speech-to-Speech (STS). Dial 1-877-826-6607.

- **TTY (Text Telephone)**

  A person who is deaf, hard-of-hearing or speech-disabled uses a TTY to type conversations to a relay agent who then reads the typed conversation to a hearing person. The relay agent transmits the hearing person's spoken words by typing them back to the TTY user.

  TTY users have two options:

1. Dial the Relay Texas number—711. TTY users will see the flickering on their equipment and need to wait a few seconds. When the Relay Agent answers "RTX XXX (F OR M) NBR PLS GA" (NBR=number, PLS=please, GA=go ahead), you type the area code and number you wish to call and type "GA" (go ahead). The relay agent will then call the number and process the call.
2. Dial the Relay Texas TTY number—1- 800 – RELAY TX (735-2989). The Relay Agent will answer with same message as above.

Note: Calling 1-800-735-2989 will process the call faster as it does not have the interactive voice message as used in 711. On the other hand, 711 is easier to remember.

- **Voice users**

Standard telephone users can easily call a hearing or speech-disabled person through Relay Texas. The procedure for using Relay Texas is as follows:

- Dial Relay Texas 711.
- A voice message will say: "You have reached Relay Texas. Press #1 to place a relay call."
- After you press #1, the relay agent will come on the line. When the relay agent answers, give him or her the area code and phone number of the person you want to call.
- The relay agent will voice to you what the other person is typing and will type to the other person everything that you say.
- Be sure to talk directly to the person you are calling and avoid saying "tell him or her." Also, make sure you say GA (go ahead) when it is the other person's turn to talk.
- **ASCII (American Standard Code for Information Interchange)**

Some people use their computers to talk on the phone instead of using a TTY. This requires a modem and special software.

Computer users should call 1-800-RELAY X1 (735-2991). Set your communication software to the following protocols at speeds ranging from 300 to 2400 baud: 8 Bits No Parity 1 Stop Bit Full Duplex. When calling at a rate of 300 baud or below, follow the above setting, using

Half Duplex. (**Note**: It may be helpful to set your "time out" to 100 seconds.)

Hearing Carry-Over

Hearing Carry-Over (HCO) allows a person with a speech disability who can hear to type their part of the conversation for the relay agent to read to the standard telephone user. Use the following procedure when using HCO:

- Dial the Relay Texas TTY number at 1-800-RELAY TX (735-2989).
- After the relay agent answers, the caller types "Hearing Carry-Over PLEASE GA."
- The relay agent will make the connections and voice the caller types to the other party. After you type "GA", pick up the handset and listen to the spoken reply.
- **Spanish Speaking Users**

  Callers who need a Spanish speaking agent can dial 7-1-1 and request one or directly dial the Spanish relay number at 1-800-662-4954.

- **VCO (Voice Carry Over)**

  Voice Carry-Over (VCO) is an option for people who cannot hear but can use their own voice during a call. Using VCO and a specially designed telephone with a text screen, a VCO user can speak directly to the other person. As the other person speaks, the Relay Agent types back the words that are being said.

  - Voice Carry-Over users call 1-TRS-VCO-1RTX (877-826-1789).
  - The relay agent will answer and type "Voice Carry-Over or TYPE GA" Voice or type the phone number of the party you want to call.
  - The relay agent will type the message "VOICE NOW" to you as your cue to start speaking. You speak directly to the hearing person. The relay agent will type to you what the hearing person says. Remember to say "GA" (go ahead) at the end of your responses.
- **Deafblind callers**

Dial 1-877-826-9348 to use the reduced typing speed feature. During these calls the message will come across the users TTY or braille TTY at the rate of 15 words per minute. The user can increase or decrease the rate in increments of 5 words per minute.

- **Internet relay service**

  Computer users can reach relay services by simply connecting to an Internet relay service website; no special modem and software are needed. After connecting to the website of your choice, the user is given instructions regarding how to continue in order to complete a call.

  Previously, hearing users were not able to make calls to IP users; however, with the advent of local ten digit number assignments (L10DN) to IP users, hearing callers can now initiate calls to IP users by dialing the individuals' L10DN.

- **Video Relay Service (VRS)**

  Video Relay Service (VRS) is a type of Telecommunications Relay Service (TRS) for individuals with hearing or speech loss and who use sign language VRS allows them to use video conference equipment (web cameras or video phone products) to speak to other parties using a standard telephone.

  The VRS call proceeds in the following manner:

- The VRS user connects to a Video Interpreter (VI). The user and the VI can see each other on video conference equipment giving them the ability to sign to each other.
- The VRS user gives the VI a phone number of a hearing person.
- The VI places a telephone call to the hearing party.
- The VI talks to the called hearing party informing them that a person with hearing or speech impairment has initiated the call. The VI also provides the called hearing person with a brief description of call procedures if the called party is unfamiliar with VRS telephone calls.
- The VI relays the conversation back and forth between the parties, thereby providing a telephone interpreting service between a hearing impaired user and the hearing party.

A standard telephone user can also initiate a VRS call by dialing the VRS user's local 10 digit number. VRS is very popular with individuals who use sign language because the conversation between the VRS user and the VI flows much more quickly than with a text-based TRS call. Unlike text-based relay services, a VI is able to express the mood of both parties; interpreting the mood of a hearing person in sign language, and voicing the mood of a signing person. Consequently, VRS is much more like a normal telephone conversation where the emotions of each party are readily identified by inflections of the voice, etc.

The VRS VI can be reached through the VRS provider's Internet site (web camera and computer), or through video equipment attached to a television. (see the list below.) Like all TRS calls, VRS is free to the caller. VRS providers are compensated for their costs from the Interstate TRS Fund, which the Federal Communications Commission (FCC) oversees.

Here is a list of VRS providers:

- Convo Relay: http://www.convorelay.com
- Gracias VRS: http://www.graciavrs.com
- Purple Relay: http://www.purple.us/
- Sorensen VRS: http://www.sorensonvrs.com
- ZVRS: http://www.zvrs.com/

Communicating with People Who Are Blind or Have Low Vision

Braille Transcription Companies

The following companies provide braille transcription:

- National Federation of the Blind Transcription Resource list
- American Council for the Blind Transcription Services

Audio Description

To Learn More about Audio Description, visit the Audio Description Project.

JAWS Demonstration

JAWS Screen Reader Demonstration

Deafblind Specialist Service Areas

This section supplements the tactics for communication with people who are deafblind.

Deafblind specialists functionally evaluate the overall situation of a person who is deafblind. They evaluate educational needs and support/ resources, existing support systems, support and training needs in relation to independent living and employment specialists help locate resources and make recommendations to agencies and organizations that are involved or requested to serve individuals. Deafblind Specialists can assist local emergency management preparedness effort by locating local hearing loss stakeholder groups and local vendors/ agencies that can provide resources to communicate with and support the individuals who are deafblind.

Specialists for Deafblind Children:

Tammy Martin, Director
Blind Children's Program
Texas Health and Human Services
Office: 512-377-0590
Work Cell: 512-410-9154

Specialists for Deafblind Adults:

Julie Johnson
Deafblind Specialists Supervisor (Vocational Rehabilitation and Older Individuals Who Are Blind Programs)
Texas Workforce Commission Rehabilitation Services
512-377-0578

Elaine Sveen
Deafblind Community Services
Criss Cole Rehabilitation Center
512-377-0424

Supplemental Information for Chapter 5

The following resources are for first responders who help people with disabilities.

Project Redd

Project REDD: Research and Evaluation on Disability and Disaster collected these reports about disasters and their effects on people with disabilities.

The Minger Foundation

The Minger Foundation prepared a Guide to Teaching Fire Safety to Students with Disabilities. Accompanying this guide are a series of four videos about students who are vision impaired, hard of hearing, mobility impaired or have learning an developmental disorders.

In addition to these resources, the Minger Foundation offers a wealth of research information.

Emergency Response for People Who Have Access and Functional Needs

This is a printable version of the Emergency Response for People Who Have Access and Functional Needs: A Guide for First Responders.

Just In Time Disaster Training Videos

The videos found in this easily searched online library cover disaster related preparedness, response, and recovery training for a wide variety areas.

To use the Just in Time Video Library, go to Disaster Resistant Communities Group. Many of the videos deal with functional needs support services and sheltering operations for people with disabilities.

Paratransit Emergency Preparedness and Operations Handbook

This handbook provides paratransit service providers with guidance, strategies, tools, and resources to plan and prepare for, respond to, and recover from a range of emergencies. The guidance is applicable to:

- urban,
- suburban,
- rural, and
- tribal paratransit operating environments.

Guidance is directed to in-house paratransit operations and to paratransit services operated under contract. It addresses the Americans with Disabilities Act (ADA) paratransit and general public demand response operations. For the PDF of the report, go to Transit Cooperative Research Program Report 160.

Getting Real Promising Practices: Inclusive Emergency Management

This online resource features Promising Practices from the 2011 FEMA Getting Real Inclusive Emergency Management Conference in Washington, D.C. The Texas Governor's Committee on People with Disabilities' website hosts a brief summary of each promising practice, a video link and transcript link to more than 40 recommended practices in inclusive emergency management nationwide. View the videos and transcripts at Getting Real Emergency Management Conference 2011.

Preparing the Workplace for Everyone: Accounting for the Needs of People with Disabilities

This tool offers practical guidelines to help emergency managers and employees plan for workplace emergencies. To access this tool, go to the U.S. Department of Labor's Office of Disability Employment Project's site, Emergency Preparedness.

Mobile-Friendly Tips for First Responders

Texas A&M University complied these tips for first responders on a website formatted for mobile devices.

Chapter 7 Legal Authority

In order to ensure effective and accessible communications to the whole community, emergency managers must identify which accessibility standards they are required to follow or will voluntarily adopt. Content and web developers must be trained to understand and apply these standards to their information and communications technology. Contracted vendors must also be held to these same standards for emergency communications deliverables.

The most common legal basis for requiring accessible information is the Americans with Disabilities Act. The ADA is a civil rights law that prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the general public. The purpose of the law is to make sure that people with disabilities have the same rights and opportunities as everyone else.

ADA Resources

- The Americans with Disabilities Act Questions and Answers page answers some of the most often asked questions about the ADA.
- The ADA Disability Law Handbook is a broad overview of rights and obligations under federal disability laws.
- Title II and Title III updated the ADA. This Fact Sheet provides information on the updates. You can also read the General Effective Communication Requirements Under Title II of the ADA.
- The Title II Technical Assistance Manual assists individuals and entities in understanding their rights and duties under the Act.

The Americans with Disabilities Act of 1990 (ADA), the Rehabilitation Act of 1973, and the Fair Housing Act (FHA), define the scope of effective communications.

The ADA and the Rehabilitation Act of 1973 (which is applied towards government entities that receive federal funding) generally require that state and local governments provide qualified individuals with disabilities equal

access to their programs, services, or activities, unless doing so would fundamentally alter the nature of their programs, services, or activities or would impose an undue burden.

Section 508

One way to help meet these requirements is to ensure that government websites have accessible features for people with disabilities. Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794d), has documented standards established by the U.S. Access Board to help agencies comply with the law. Section 508 is an amendment to the Rehabilitation Act of 1973 that requires federal agencies to make their electronic and information technology accessible to people with disabilities

Section 508 standards help ensure that all web pages, documents, PDFs, spreadsheets, slide presentations, and/or multimedia posted to web pages or sent by email or shared on social media will be accessible and useable by people with disabilities, including people who use assistive technology.

The Justice Department's "Section 508 Report to the President and Congress: "Accessibility of Federal Electronic and Information Technology" provides findings based on a survey of federal agencies on the accessibility of their electronic and information technology (EIT) and the procedures used to implement the requirements of Section 508.

Texas Government Code 2054 Sub M. requires that all state agencies and state institutions of higher education comply with Section 508. State agencies receiving federal funding must also comply with Section 508 (Administrative), and all programs that receive federal funding must comply with Section 508.

Texas Government Code 2054, Subchapter M, enacted in 2005, requires that all state agencies, including universities and institutions of higher education, comply with section 508. All programs that receive federal funding must comply with Section 504 also.

Section 504 states, in part, that no otherwise qualified individual with a disability shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance or under any program or activity conducted by any Executive agency or by the United States Postal Service.

Organizations under the scope of sections 508 and 504 must provide state employees and members of the public access to and use of electronic and information resources. State web accessibility standards, outlined in Texas Administrative Code Chapter 206, are in alignment with federal regulations as outlined in Section 508 of the Rehabilitation Act of 1973, as amended in 1998.

State standards for providing accessible software and hardware products to state employees with disabilities are outlined in Texas Administrative Code, Chapter 213.

State Resources

- Electronic and Information Resources (EIR) accessibility
- Texas Administrative Code Title 1, Chapter 206 and Chapter 213
- Texas Government Code 2054, Subchapter M

Twenty-First Century Communications and Video Accessibility Act

On October 8, 2010, the Twenty-First Century Communications and Video Accessibility Act (CVAA) became law. The CVAA updates federal communications law to increase the access of people with disabilities to modern communications. The CVAA makes sure that accessibility laws enacted in the 1980s and 1990s are brought up to date with 21st-century technologies like digital, broadband, and mobile innovations.

Read a Fact Sheet on the Twenty-First Century Communications and Video Accessibility Act here.

You can also read this FCC report: Implementation of the Twenty-First Century Communications and Video Accessibility Act of 2010.

FCC Orders

Communication providers must comply with Federal Communications Commission orders. The orders are published in sections 716 and 717 of the Communications Act of 1934, as enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010.

Regulations for Shelters

The Stafford Act and Post-Katrina Emergency Management Reform Act (PKEMRA), together with federal civil rights laws, require integration and equal opportunity for people with disabilities in general population shelters.

Texas Accessibility Standards (TAS), in addition to ADA and other federal mandates, contain scoping and technical requirements for accessibility to sites, facilities, buildings, and elements by people with disabilities.

Plain Language

The Federal requirements for Plain Language are in the "Final Guidance for the Plain Writing Act of 2010," published April 13, 2010. This guidance sets the standard for plain language communication by governmental entities. Read the Federal Plain Language Guidelines here.

References

Accessibility by the Numbers

- YouTube Video: Accessibility by the Numbers
- Download Audio MP3 File: Accessibility by the Numbers
- Download Instructional Word Document: Accessibility by the Numbers
- Download Instructional Adobe PDF: Accessibility by the Numbers

Understanding Assistive Technology

- YouTube Video: Understanding Assistive Technology
- Download Audio MP3 File: Understanding Assistive Technology
- Download Instructional Word Document: Understanding Assistive Technology
- Download Instructional Adobe PDF: Understanding Assistive Technology